Executive Director Update
December 8, 2009

Actuarial Valuation as of June 30, 2009

ATRS has now officially received its June 30, 2009 actuarial valuation. As expected, the negative 18% return for the year ending June 30, 2009, had a negative impact on the ATRS Trust Fund. The number of years to pay off the ATRS liabilities increased from 21 to 45 years. The unfunded liabilities also increased from $2 billion as of June 30, 2008, to $3.4 billion as of June 30, 2009. In addition, due to a four year smoothing process in which gains and losses are not all recognized in one year but rather are smoothed in over a four-year period, ATRS knows it has an additional $1.8 billion of losses it must realize in the next three years. Hopefully, market gains in the next couple of years will help offset those losses. ATRS hopes to return to less than 30 years to pay off its unfunded liabilities. However, achieving that goal will require quality investment returns and ATRS operating as efficiently as possible.

The unfunded liabilities and the years to amortize those unfunded liabilities will likely go up in the short term. Due to ATRS being required to realize previous losses of $1.8 billion dollars in the next three years, it will be hard to have smoothed gains that exceed those losses. According to the unaudited daily updates ATRS receives, ATRS has increased in value well over $1 billion since June 30, 2009. At the same time, an illustration in the attachment to this update shows that even with a 25% return in this fiscal year, another 25% return in the following fiscal year, and three years of 8% return thereafter, it will take ATRS until June 30, 2014, to decrease its unfunded liabilities amortization period below 30 years.

However, ATRS is well positioned relative to many retirement plans across the country. ATRS remains funded at a 76% level. Plus, ATRS is currently using only 2% of its trust fund per year to pay benefits to retirees and members. All of these factors give ATRS a long period of time to conservatively and comprehensively address the amortization period and work to reduce it back to 30 years or less. Needing 30 years or less to pay the unfunded liabilities is seen as a good benchmark for public retirement systems.

The numbers in reports often become confusing, especially the numbers in an actuarial report. Another way to look at the current status of ATRS is to consider an example of purchasing a home. In this example, ATRS is purchasing a new home for $140,000. ATRS has funds to make a down payment on the home of $106,000, leaving a balance of $34,000 to be paid over time. Based upon the funds available to apply to the debt, it will take ATRS 45 years to pay the balance due on the home. The payment comes from the excess contributions beyond what it takes to pay the normal cost of currently accruing benefits.

In years when ATRS receives a greater than 8% return on investments, ATRS has extra funds to pay on debt. In addition, when the assumption used by the actuaries show more costs should exist than what ATRS actually incurs, ATRS also receives additional funds to pay on the "home mortgage". For instance, if members work longer before retiring than the actuaries assume, that longer working period equates to a savings that ATRS can pay on its debt. At the same time if workers retire earlier or ATRS does not get an 8% return, the negative difference is added to the debt, just like this year. All in all, ATRS is well positioned with to protect the long-term interests of members and retirees. ATRS is here to ensure the long-term stability and quality of the retirement system.

The attachment with this update is part of a presentation to the ATRS Board by Gabriel, Roeder, Smith & Company, the ATRS actuary with some additional information I added. I presented the attachment to the Joint Retirement Committee last week when addressing the current status of ATRS.

If you have questions or need more information, please feel free to call me on my direct line at (501) 682-1820 or my cell (501) 318-5998 or email me at georgeh@artrs.gov. In addition, if you use Twitter, you can follow events by finding the Twitter ID of ATRS or find George Hopkins in the Twitter directory. On Twitter, you will have access to day-to-day updates on ATRS happenings.

Joint Retirement Committee Meeting

December 4, 2009

Arkansas Teacher Retirement System

Actuarial Valuation Results as of June 30, 2009

Valuation results as of June 30, 2009 received from actuarial Gabriel Roeder Smith & Company. Most of the information in this presentation came directly from a report to ATRS from GRS.

Covered Population Overview

	Number at June 30		
	2009	**2008**	**% Change**
Active	70,655	70,172	0.7%
TDROP	4,631	4,630	0.0%
Inactive	11,766	11,688	0.7%
Retired	28,818	26,801	7.5%
Total	115,870	113,291	2.3%

Also included in the 2009 valuation were 3,500 reemployed retirees with total earnings of $87.5 Million. ATRS receives 14 % employer contributions on these individuals per section 24-7-708.

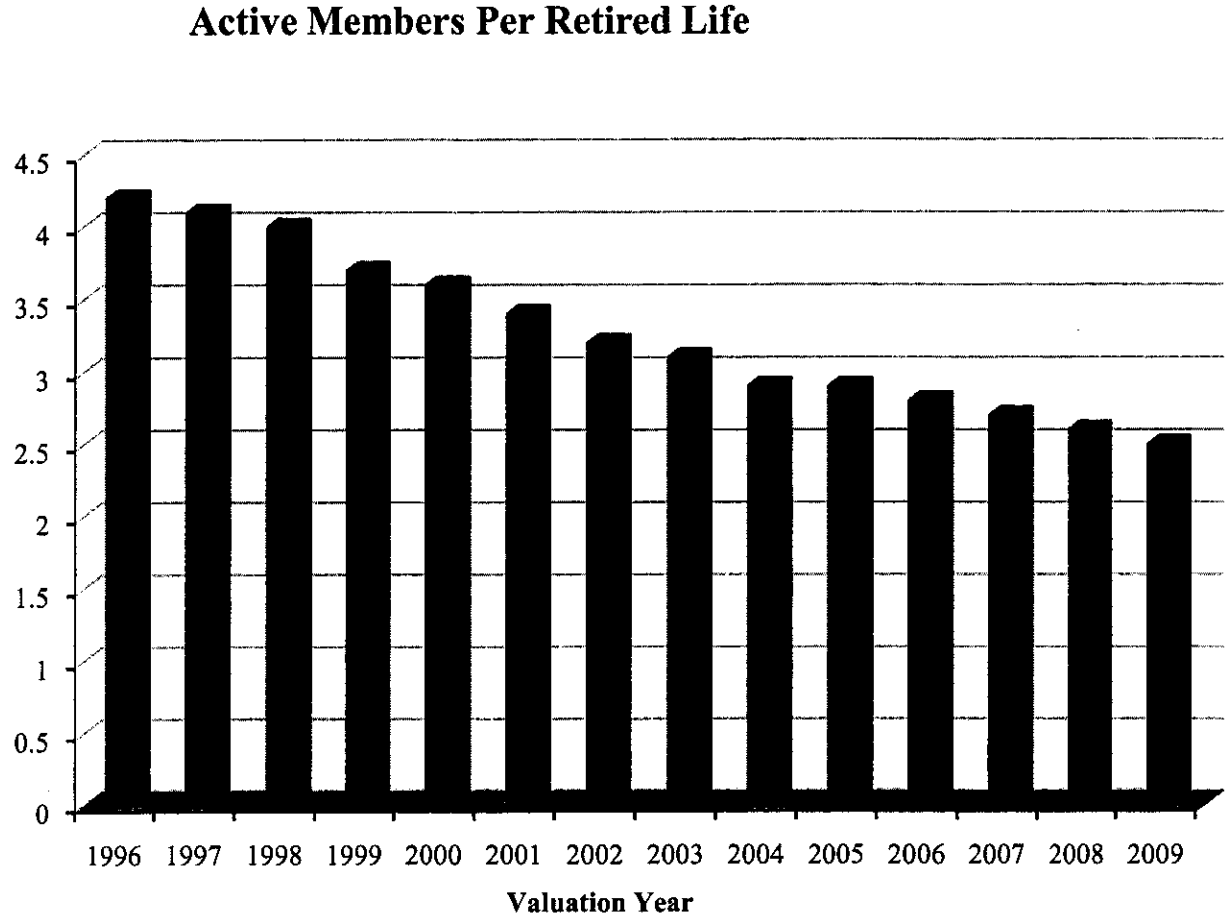
Active Members

June 30	Number	Group Averages			% Increase
		Age	Service	Annual Earnings	
2003	62,432	44.0	9.5	$26,963	2.70%
2004	63,185	44.2	9.5	27,660	2.59%
2005	65,793	44.2	9.4	29,826	7.83%
2006	67,710	44.3	9.3	30,714	2.98%
2007	69,226	44.4	9.3	31,645	3.03%
2008	70,172	44.5	9.4	32,319	2.13%
2009	70,655	44.7	9.5	32,804	1.50%

T-DROP, Inactive and Retired Members

	T-DROP Members		Deferred Members		Retired Members	
June 30	Number	Payroll ($Mil)	Number	Vested Benefit ($Mil)	Number	Benefit ($Mil)
2003	4,112		8,444	$35	20,271	$360
2004	4,425		9,004	37	21,428	386
2005	4,448	$243	9,470	39	22,680	415
2006	4,570	255	9,973	41	24,153	450
2007	4,709	270	10,689	45	25,611	485
2008	4,630	267	11,688	56	26,801	516
2009	4,631	274	11,766	53	28,818	565

Active Members Per Retired Life



Computed Actuarial Liabilities

Actuarial Accrued Liabilities for:	$Millions	% of Total
Age and service retirement allowances based on total service likely to be rendered by *present active members*	$ 5,089	36%
Age and service retirement allowances based on total service likely to be rendered by present *T-DROP members*	2,255	16%
Benefits payable to present retirees and beneficiaries	5,963	43%
Benefits payable for all other reasons	712	5%
Total	$14,019	100%
Applicable Assets	10,617	
Liabilities to be Covered by Future Contributions	$ 3,402	

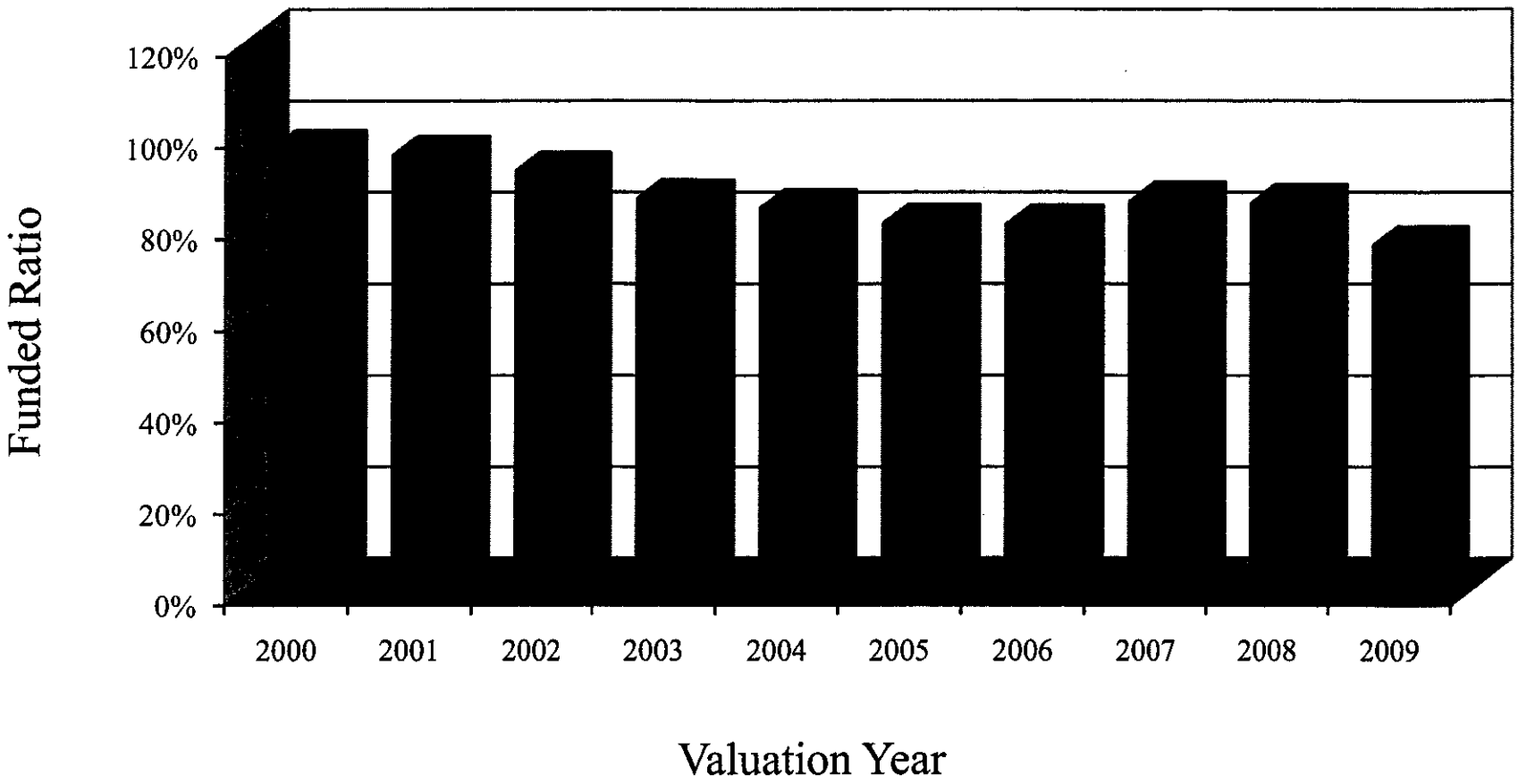
Results of 6/30/2009 Valuation

		$Millions
1)	Accrued Liabilities	**$14,019**
2)	Assets at Funding Value	**10,617**
3)	UAAL	**3,402**
	- % Funded (2)/(1):	**76%**
	Prior Year	85%

Results of 6/30/2009 Valuation

		% Payroll
1)	ER Normal Cost	**8.28%**
2)	UAAL	**5.72%**
3)	Employer Contribution Rate	**14.00%**
	Amortization years	**45**
	Prior year	**21**

Funded Ratio: Actuarial Value of Assets as Percents of Accrued Liabilities



Experience in FY 2009

- Investment return for the year ended June 30, 2009 was unfavorable compared to the 8% assumed return. The market value rate of return was (18.29)%*.
- The amortization period this year is 45 years, a large increase from last year's 21-year period.

Funding Value of Assets

Year Ended June 30	2009
A. Funding Value Beginning of Year	$ 11,319,195,490
B. Market Value End of Year	8,847,259,228
C. Market Value Beginning of Year	11,018,088,336
D. Non-Investment Net Cash Flow	(171,572,047)
E. Investment Return	
E1. Market Total: B - C - D	(1,999,257,061)
E2. Amount for Immediate Recognition (8%)	898,672,757
E3. Amount for Phased-In Recognition: E1-E2	(2,897,929,818)
F. Phased-In Recognition of Investment Return	
F1. Current Year: 0.25 x E3	(724,482,455)
F2. First Prior Year	(330,102,709)
F3. Second Prior Year	286,310,502
F4. Third Prior Year	116,579,966
F5. Total Recognized Investment Gain	(651,694,696)
G. Funding Value End of Year:	
G1. Preliminary Funding Value End of Year: A+D+E2+F6	11,394,601,504
G2. Upper Corridor Limit: 120% x B	10,616,711,074
G3. Lower Corridor Limit: 80% x B	7,077,807,382
G4. Funding Value End of Year	10,616,711,074
H. Ratio of Funding Value to Market Value (80%-120%)	120 %
I. Market Rate of Return	(18.29)%

- The loss this year was substantial enough for the 20% corridor to affect the results.
- The market value is *below* the funding value (by 20%).
- Future unrecognized losses of about $1.8 billion will be recognized over three future years, putting upward pressure on the amortization period and downward pressure on the funded percent.

- All major market indices and virtually all retirement systems have experienced negative returns for the period ending June 30.
- ATRS has weathered very bad markets before. For example, on October 10, 2002, the Dow Jones Industrial Average dipped below 7200 in intra day trading.
- The most recent low point of the Dow Jones Industrial Average was 6547 on March 9, 2009, but happily it is currently in the 10,000 area.

The Future

- Unless there is a substantial investment gain in FY 2010, the amortization period is likely to increase significantly again next year.
- We can get a picture of what the future might hold by re-computing the June 30, 2009 results based on the market value of assets.

The Future

- If this were done, the amortization period would be well over 100 years and the funded percent would be 63%.
- Whether or not the above results actually show up in a future valuation depends upon future investment return.
- Lets have a look at the effect of alternate future rates of investment return.

Projected Amortization Years

Fiscal Year	2009	2010	2011	2012	2013	2014
Projection A						
Investment Return	-18%	20%	20%	8%	8%	8%
Amortization Years	45.4	56	87	92	57	54
Projection B						
Investment Return		20%	12%	8%	8%	8%
Amortization Years		56	Over 100	Over 100	Over 100	Over 100
Projection C						
Investment Return		25%	25%	8%	8%	8%
Amortization Years		51	56	47	31	27

These projection are based upon many assumptions and are unlikely to be realized exactly even if investment return were exactly as shown.

Conclusion

- It is unlikely that the present 14% employer rate can return us to a 30 year amortization period in the near term.
- We need either more than 8% return or more than 14% contributions to get back to 30 years in the near term. For example 2 years of 25% return (Projection C) would bring us back to 30 years by 2014.
- These are challenging economic times, however, retirees can be reassured by the fact that ATRS' net cash flow needs are small relative to its assets. After netting off contribution income, ATRS' (net) payout is less than 2% of assets.

Conclusion

- ATRS dealt successfully with the 2000-2003 market downturn.
- It is regrettable to be faced with a similar challenge again.
- Because of the sound funding program that ATRS has maintained in the past, ATRS is positioned to weather out the storm.

Conclusion

Typically a retirement system has four ways to reduce unfunded liabilities and to reduce the years necessary to amortize the unfunded liabilities. The four methods include the following:

1. **Investment returns above 8%**

   The average investment returns must be above 8% since the actuarial valuation assumes an 8% return for the purpose of establishing the unfunded liabilities in the first place. The higher the average return above 8%, the more assets that can be applied to reduce accrued unfunded liabilities.

Conclusion

2. Change Member Behavior

Member behavior may be modified to reduce the overall cost to the system. For instance, changing a member's decision about when to actually retire and begin receiving benefits can substantially change the cost for a system. In almost every instance, the longer a member delays retirement, the less expensive the member is to the retirement system. The actuaries use assumed retirement dates to establish the actuarial liabilities. If average retirements occur later than assumed, the system receives a savings benefit. Several other factors can affect member behavior and reduce a system's cost.

Conclusion

3. Increase Contribution Rates

An increase in the employer and/or member contribution rate could be applied to reduce the unfunded liabilities. The ATRS contribution rate for employers is currently 14%. The contribution rate for contributory members is now 6%. A 1% employer contribution rate increase would generate approximately $27.3 million. A 1% increase in the member contribution rate would generate $17.7million. A combined 1% increase of both would generate $45 million.

Conclusion

4. Reduction of Benefits/Reduction in Costs

A reduction of benefits and reduced cost of operation allow more funds to go to reduce unfunded liabilities. A reduction of benefits could come in a variety of ways. However, any reduction in benefits must comply with legal and constitutional requirements. Examples of the type of reductions that could occur can be provided. ATRS has been actively looking to reduce costs of operation. The process of cost cutting will continue to be a focus at ATRS.

Estimated Effect of 1% Rise in Employer Contributions for ATRS

Active Member Matching 2009	$ 328,926,790.06	divided by 14 % rate = 2009 salaries	$ 2,349,477,071.86	times 1% =	$ 23,494,770.72
T-DROP Matching 2009*	$ 29,267,001.20	*divided by 10% rate = 2009 salaries	$ 292,670,012.00	times 1% =	$ 2,926,700.12
Rehired Retiress 2010**	n/a	n/a	$ 87,500,000.00	times 1% =	$ 875,000.00
					$ 27,296,470.84

*2009 T-DROP matching rate was 14% for members who enter T-DROP 9/1/2003 or later, 6% for members who entered T-DROP prior to 9/1/2003
14% + 6% = 20% / 2 = 10% average

**Rehired Retirees for 2010 are estimated to be 3,500, earning an average salary of $25,000
3,500 * $25,000 = $87,500,000

Estimated Effect of 1% Rise in Employee Contributions for ATRS

Active Member Contributions 2009	$ 106,007,497.90	divided by 6 % rate = 2009 salaries	$ 1,766,791,631.67	times 1% =	**$ 17,667,916.32**

Combined Employee/Employer $ 44,964,387.16

12/03/2009